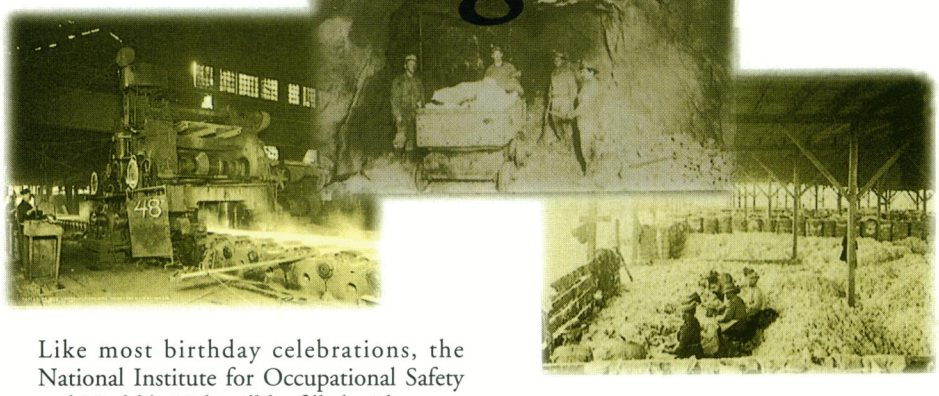
Working Toward a New



Like most birthday celebrations, the National Institute for Occupational Safety and Health's 25th will be filled with memories of the past and hope and uncertainty of what the future may bring.

The sweetest memories are of the decade following the creation of NIOSH in 1970, years marked by a flurry of successes. Such dreaded occupational ills as coal worker's pneumoconiosis (black lung) and byssinosis (brown lung) from cotton dust were virtually eliminated in the wake of NIOSH's pioneering research. During those early years, NIOSH developed occupational safety and health as a specialty for doctors, nurses, and engineers. Few of the 1,500 doctors and 4,000 nurses in the field today have not benefited from NIOSH training or funding.

NIOSH experienced a decline in the 1980s, when the agency's funding shrank. After climbing as high as $80 million early in the decade, NIOSH's budget plunged three years later to its lowest point of $57 million.

Today, NIOSH has reached a turning point. Budget increases in recent years have renewed confidence among its leaders. The agency's 1995 budget of $134 million is its largest ever. But this figure may be deceiving; because of inflation this budget has the buying power of only 75% of the 1980 budget. With Congress working to cut the federal deficit, NIOSH leaders expect more lean years ahead.

Director Linda Rosenstock is using NIOSH's anniversary as a time to take stock of the greatest needs in occupational safety and health and make them the agency's priorities. Many of the carcinogens and other threats that guided research through the early years have been controlled. But workers today face new hazards that come with a changing economy. "The workplace is changing as the economy evolves from one based on an industrial sector to a service sector," Rosenstock said. "There's an increasing number of elderly, women, and minorities in the workforce. All these changes call for a new approach to occupational safety and health research."

Rosenstock set about charting the agency's future shortly after her appointment as director in 1994 by establishing new research priorities. Last fall, Rosenstock took her quest for a new occupational safety and health agenda outside the agency. She and other NIOSH leaders sought out the recommendations of representatives of labor, industry, government, academia, and the health professions. The result is the National Occupational Research Agenda (NORA), a set of priorities to guide occupational health and safety research through the next decade. NORA is to be presented to the public during NIOSH's 25th anniversary celebration in Washington, DC, on April 29.

Early Years

Historians trace the roots of the occupational safety and health movement back to the 1870s when factories sprang up across the country after the Civil War. Thousands of mostly young, inexperienced workers were killed or maimed by hazardous machinery before Massachusetts passed the country's first factory inspection law in 1877. Several other states quickly followed suit.

The first federal agency created to promote worker safety was the U.S. Bureau of Mines, organized in 1910. It was formed in the wake of a tragic 1907 mining accident that killed 362 coal workers in Monongah, West Virginia. Concern for the safety of steel workers spurred the development of the National Safety Council in 1915.

The U.S. government first called for reports on industrial diseases and accidents when it created the Department of Labor in 1913. But it wasn't until 1934 that the federal government formed an agency dedicated primarily to worker safety and health. This new agency, the Bureau of Labor Standards, helped states improve their own laws protecting workers.

The budding environmental movement of the 1960s drew attention to the dangers of chemical exposure in the workplace. In 1965, the Public Health Service (PHS) responded with a report linking cancer with workplace hazards. The report challenged the federal government to create a national occupational health program.

President Lyndon Johnson proposed such a program early in 1968. But political squabbling kept the Occupational Safety and Health Act from being passed until 1970, under the administration of President Richard Nixon. It went into effect the following year.

The act, which created the Occupational Safety and Health Administration (OSHA) under the Department of Labor to regulate working conditions, also formed NIOSH under the Public Health Service to conduct research and make recommendations to improve workers' safety and health. As part of the Centers for Disease Control and Prevention, NIOSH has offices in Atlanta and research facilities in Cincinnati and Morgantown, West Virginia. NIOSH's headquarters are in Washington, D.C.

Injuries and Deaths Decline

When NIOSH was created, much of the country's workforce was engaged in manufacturing and related industries. Early research focused on the carcinogens noted in the PHS's 1965 report. Observers recall the agency's first decade as a time of

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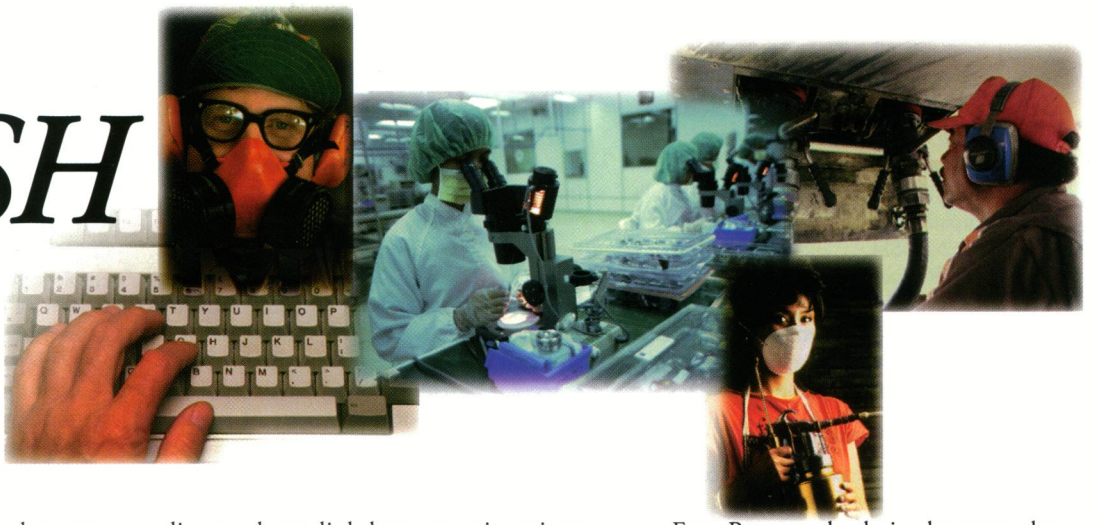
NIOSH



intense productivity. "It produced an enormous amount of information for people in the industry," said Knut Ringen, director of the Center to Protect Workers' Rights, a nonprofit research branch of the AFL-CIO. "NIOSH put occupational diseases on the map."

One of the agency's early successes was establishing a program to limit miners' exposure to coal dust. Pneumoconiosis had plagued men who'd spent their entire working lives mining coal. "Ongoing surveillance resulted in a substantial reduction of coal worker's pneumoconiosis," said Gregory R. Wagner, director of NIOSH's Division of Respiratory Disease Standards in Morgantown.

Agency research also led to a decline in byssinosis among cotton workers. Textile workers now are protected by improved workplace ventilation, medical surveillance, and precautions such as washing raw cotton to reduce the dust.

NIOSH scientists discovered a new threat to workers in the late 1970s when their research revealed an unusually high number of reproductive disorders—including defective sperm and high rates of miscarriage—among people exposed to four ethylene glycol ethers. These compounds were widely used in inks, cleaning agents, paints, and cosmetics. Industry responded quickly with the voluntary elimination of these chemicals for most uses. Over the years, NIOSH recommended exposure limits for several hundred industrial chemicals and other hazards.

The dawn of the computer age brought the fear of new risks to the workplace. In one of its most memorable studies, NIOSH alleviated the fears of millions of women working with video display terminals (VDTs). In 1991, a widely publicized cluster of spontaneous abortions among VDT operators generated concern that the computer screens were to blame. After extensive research, however, the agency disproved any link between miscarriages and the use of VDTs.

NIOSH under Fire

The value of NIOSH's research is evidenced by the 50% decrease in workplace deaths from injury since the agency's formation. Yet in spite of its success, NIOSH has struggled for recognition.

Critics have accused the agency of working in isolation, out of touch with the needs of OSHA and industry. Researchers concentrated too much on gathering data, they claim, and too little on finding solutions. "NIOSH is not user-friendly to industry," said Howard M. Sandler, president of Sandler Occupational Medicine Associates in Melville, New York, and a former NIOSH medical officer. "The application must get out to the users." Ringen claims the agency's researchers "make little effort relaying their information to those who have to take action."

NIOSH's Wagner concedes his agency has sometimes failed to resolve the problems it has uncovered. "We did a lot of testing without proposing solutions," he said. "Often, research is directed toward establishing exposure in the workplace. Our next step is seeing that the best response is identified."

Critics often blame budget cuts and political pressures in the 1980s for NIOSH's failure to meet industry's needs. "NIOSH doesn't have the resources," said Bernard Goldstein, director of the New Jersey-based Environmental and Occupational Health Sciences Institute. "They haven't achieved anywhere near the critical mass they should have, given the size of the occupational health problems in the United States." Ringen traces the agency's struggles to the Reagan administration's pro-business agenda. "The 1980 election had a devastating effect on NIOSH," he said. "With the fear of political retaliation, NIOSH grew inward and lost touch."

Even Rosenstock admits the agency has not always sold itself well. NIOSH's weak image became painfully clear in 1995, when Representative Cass Ballenger (R-North Carolina) and Senator Kay Bailey Hutchison (R-Texas) introduced bills to eliminate the agency, claiming that NIOSH duplicates the research of OSHA, the EPA, the National Safety Council, and private industry.

"The lack of coordination between OSHA and NIOSH has been a recurring problem," said Gary Visscher, a staff professional on the House Workforce Protections Subcommittee. "The people at NIOSH report to the CDC. If they were reporting to some person at OSHA, their agendas would be the same."

NIOSH has proven stronger than its image. The agency emerged from the recent congressional battle, not only intact, but with a budget increase of $2 million, though the increase will be subject to at least a portion of $31 million in administrative cuts the CDC will have to distribute throughout its centers in 1996.

Shifting Focus

Shortly after her appointment, Rosenstock established four new priorities to guide the agency's research.

One priority is to improve national surveillance for occupational disease and injury. The agency previously conducted surveillance programs for specific conditions, such as carpal tunnel syndrome and occupational lung disease, but had no system for collecting data on all work-related health problems. "We use the data we collect to see whether there are trends in injuries or mortality, so we can better pinpoint where we'll do larger studies," said Marie Haring Sweeney, senior scientist at NIOSH's Cincinnati office, explaining the need to collect more data.

Another priority calls for intervention research, including follow-up on NIOSH recommendations. In the past, NIOSH sug-

gested methods of reducing risk, but rarely checked to see if they worked. "We're not satisfied merely to do lab research," Rosenstock said. "We want to move further, to demonstrate the applicability of our recommendations."

Studying the accessibility, cost, and quality of occupational health care is another new priority for NIOSH.

Finally, Rosenstock is calling for a closer look at how workplace organization affects workers' health and well-being. The effects of unemployment, overemployment, and shift work are among the factors under study.

Nation Shapes Agenda

Rosenstock has worked hard to strengthen NIOSH's sometimes loose ties to industry, labor, and other government agencies. Her efforts began with moving the agency's headquarters from Atlanta to Washington, D.C. in 1994. "One of the concerns was that NIOSH wasn't dealing with OSHA or labor or industry, and these groups are all represented well in Washington," Rosenstock said. "We've built up partnerships inside and outside government."

While meeting last summer with these partners, Rosenstock learned they all faced similar budget constraints. In order to focus the agencies' efforts, she proposed NORA.

Rosenstock began by soliciting the ideas of industry, labor, and health-care leaders. General Motors, IBM, Mobil, the United Auto Workers, the American Public Health Association, and Public Citizen are among the 46 organizations that have served on NORA committees. In February, NIOSH took its call for recommendations to the public with town meetings in Chicago, Seattle, and Boston. Not surprisingly, the 21 priorities outlined in NORA reflect today's evolving workplace.

The groups involved in creating NORA were virtually unanimous in their plea for greater emphasis on small business. Small businesses (20 or fewer workers) already employ some 26% of the U.S. workforce, and their numbers are growing. Because they observe relatively few employees, small-business owners are often unaware of hazards associated with their industry. Moreover, they typically have neither the money nor the expertise to develop prevention programs common at larger corporations.

NORA's contributors also recognized the growing number of workers who are older or younger than normal, or disabled, by calling for research on their risks. In this, they echoed Rosenstock's call for greater surveillance to spot emerging trends and an evaluation of occupational health care.

Among NORA's priorities are several diseases and injuries, including traumatic injuries and hearing loss—a prevalent occupational illness. Other priorities are chronic obstructional pulmonary disease and asthma, which has increased in recent decades to become the most common diagnosis among workers seeking treatment for respiratory illness. According to NIOSH, nearly 24% of the workforce is potentially exposed to sensitizers and irritants associated with asthma. "Occupational asthma is now the most important lung disease," Wagner said. "We're working to better understand how to prevent it."

Twenty-five years ago, sick building syndrome was virtually unheard of. Since then, the number of complaints NIOSH has received about indoor air quality has risen dramatically. Today, more than half of U.S. employees work inside. NIOSH estimates up to 30% of them may be affected by contaminants in the air, and the agency has made this area of research a priority.

Infertility and pregnancy abnormalities are on the rise. Today, one in 12 American couples are unable to conceive; 17% of all conceptions end in miscarriage. While some cases have been linked to occupational exposures, most remain a mystery. NORA's contributors believe the area deserves further study. "There's an awful lot that's not known about infertility," Wagner said. "But it's important to study workplace exposure when you consider so many people of child-bearing age are at work eight, nine hours a day."

NORA's public release in April marks what Rosenstock hopes will not be the end, but the beginning of a long partnership among those who shaped NORA. "The intention of NORA was that we could work with others," she said. "A very satisfying and unanticipated benefit has been the enthusiasm others brought to the process. NORA's success will depend on whether NIOSH and its partners implement it."

Cynthia Washam